DOBROVOL'SKIY, I.

Our practice in controlling the maintenance of credit. Den. i kred. 20 no.8:63-64 Ag '62. (MIRA 15:9)

1. Starshiy kreditnyy inspektor Manturovskogo otdeleniya Gosbanka.
(Manturovo (Kostroma Province)—Credit)

DOBROVOL'SKIY, I. A.

Gas resistance of tree and brushwood species. Les. khoz. 5, No 4, 1952.

Country : USSR K
Category: Forestry. Forest Cultures.

Abs Jour: RZhBiol., No 11, 1958, No 48799

Author : Dobrovol'skiy, I.I.
Inst : Krivoi Rog State Pedagogical Institute.
Title : Green Plantings at Krivoi Rog

Orig Pub: Nauk. zap. Kryvorizk derzh ped. in-t, 1957, vyp, 2, 117-130

Abstract: This is a description of a study made of the dendroflora of Krivoi Rog. The article gives the composition according to the species of the plantings in parks, street plantings, plantings in squares and other plantings (115 species of trees and shrubs are listed). The most durable and valuable species

Card : 1/2

Country : USSR
Category: Forestry. Forest Cultures.

Abs Jour:RZhBiol., No 11, 1958, No 48799

have been separated. An assortment for street decoration is recommended. The article gives data on the resistance of the principal species to gas.

Card : 2/2

USSR / Forestry. Biology and Typology. K-2

Abs Jour: Ref Zhur-Biol., No 16, 1958, 72778.

Author : Dobrovol'skiy, I. A.
Inst : Krivoy Rag State Pedagogical Institute.
Title : Vegetation Renewal of Some Tree-Shrub Species in the Steppe Forest Plantations.

Orig Pub: Nauk. zap. Krivoriz'k. derzh. ped. in-t, 1957, vip. 2, 131-136.

Abstract: Investigations (1950-1951) were conducted on fresh cutovers in the Krivorozh Forest and in Khersonskaya Oblast (1954) on plantations of pedunculate oak, common ash and white acacia. Evaluative characteristics of the plantations were cited. The greatest shoot capacity is observed in oak (30-35 shoots per stump at the 25-30 year age), which is strengthened in the middle-aged and

DOBROVOL'SKIY, I.A.

Cultivation of Metasequoia glyptostroboides Hu et Cheng in steppe regions of the Ukrainian S.S.R. Bot. zhur. 44 no.2:199-202 F '59. (MIRA 12:6)

1. Kriverozhskiy gosudarstvennyy pedagogicheskiy institut.
(Ukraine--Sequoia)

BELOKON', I.P. [Bilokin', I.P.]; DOBROVOL'SKIY, I.A. [Dobrovol'skyi, I.A.]

"Wiadomosci botaniczne" [in Polish], vols. 1-3, 1957-1959. Reviewed by I.P.Bilokin', I.A.Dobrovol'skyi, I.A. Ukr.bot. zhur. 17 no.3:98-102 '60. (MIRA 13:7)
(Poland--Botany--Periodicals)

DOBROVOL'SKIY, I.A.[Dobrovol's'kyi, I.A.]

Results of the introduction of some ornamental trees and shrubs in the Krivoy Rog area. Ukr. bot. zhur. 18 no.1:87-91 '61. (MIRA 14:3)

1. Krivorozhskiy gosudarstvennyy pedinstitut.
(Krivoy Rog Basin—Plants, Ornamental) (Plant introduction)

DOBROVOL'SKIY, I.A. [Dobrovol's'kyi, I.A.]

Review of the journal "Wiadomosci Botaniczne", vol. 4, 1960. Ukr. bot. zhur. 18 no.5:107-108 '61. (MIRA 17:2)

DOBROVOL'SKIY, I.A. [Dobrovol's'kyi, I.A.]

Review of the journal "Wiadomosci botaniczne", vol.5, nos. 1-4, 1961.
Ukr. bot. zhur. 19 no.6:105-107 '62. (MIRA 16:2)
(Poland—Botany—Periodicals)

DOBROVOL'SKIY, I.A.

Use of new growth stimulants in floriculture. Biul. Glav. bot. sada no.53:52-55 '64. (MIRA 17:6)

1. Krivorozhskiy gosudarstvennyy pedagogicheskiy institut.

DOBROVOL'SKIY, I.A. [Dobrovol's'kyi, I.A.]

Review of the periodical "Wiadomosci botaniczne" for 1962.
Ukr. bot. zhur. 21 no.1:105-109 '64. (MIRA 17:3)

9(1) SOV/162-58-3-7/26

AUTHORS: Dobrovol'skiy, I.F., and Chuzhkov, Yu.P.

TITLE: The Practical Value of the Kelleher Lens (K voprosu o prakticheskoy tsennosti linzy Kellekhera)

PERIODICAL: Nauchnyye doklady vysshey shkoly, Radiotekhnika i elektronika, 1958, Nr 3, pp 48-53 (USSR)

ABSTRACT: The authors compare the Kelleher lens to an ordinary hyperbolic lens. The results of experiments show the directivity patterns of both lenses are practically idential under equal radiation conditions. The directivity diagram of the Kelleher lens is not a specific feature of the latter, if compared to the diagrams of horn and reflector antennas. Calculations performed by the authors show that the manufacture of the more complicated Kelleher lens require a greater amount of material than the hyperbolic lens with the same opening. There are 4 graphs and 1 English reference.

Card 1/2

The Practical Value of the Kelleher Lens SOV/162-58-3-7/26

ASSOCIATION: Sibirskiy fiziko-tekhnicheskiy nauchno-issledovatel'skiy institut (Siberian Scientific Research Institute of Physical Engineering)

SUBMITTED: February 5, 1958

Card 2/2

9.1700

S/112/59/000/014/076/085
A052/A001

Translation from: Referativnyy zhurnal, Elektrotekhnika, 1959, No. 14, p. 249, # 30318

AUTHOR: Dobrovol'skiy, I. F.

TITLE: Calculation of the Near Field of a Vertical Antenna Located Over the Earth's Surface

PERIODICAL: Tr. Sibirsk. fiz.-tekhn. in-ta pri Tomskom un-te, 1958, No. 36, pp. 409-418

TEXT: A similar problem was solved previously without an allowance for real excitation conditions of antenna (Earth effect); thus it was impossible to calculate the distribution of currents in the antenna, its impedance and the field amplitude. A wave equation for Hertz vector is composed; a complete Green function is derived which represents an expression for Hertz vector of an elementary dipole lifted to a certain altitude over the flat Earth with arbitrary electric characteristics. Two cases are considered: the first case includes decimeter and upward wavelengths at various grounds; the second case corresponds

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Calculation of the Near Field of a Vertical Antenna Located Over the Earth's Surface

to a predominance of bias currents over conduction currents in the ground, and encompasses practically the whole Earth surface from dry land to see water in SW and USW bands. Integration of the Green function obtained over the entire considered volume leads to Hertz vector, whose value makes it possible to calculate the components of electric and magnetic fields of the vertical antenna located over the Earth's surface.

V. I. M.

Translator's note: This is the full translation of the original Russian abstract.

84496
S/112/59/000/014/077/085
A052/A001

9.1700

Translation from: Referativnyy zhurnal, Elektrotekhnika, 1959, No. 14, pp. 249-250, # 30319

AUTHOR: Dobrovol'skiy, I. F.

TITLE: Input Resistance of a Vertical Vibrator Located Over the Earth's Surface

PERIODICAL: Tr. Sibirsk. fiz.-tekhn. in-ta pri Tomskom un-te, 1958, No. 36, pp. 419-426

TEXT: The problem is solved by the Leontovich-Levin method taking into account an approximate expression for the field near a vertical antenna under the following assumptions: $a_0/l \ll 1$ - and $a_0/\lambda \ll 1$, where a_0 is the radius of cylindric vibrator, l-its length, λ - wavelength. The tangential component of electric current is found from an approximate expression for the Hertz vector of the vertical antenna, and the approximation is the better the higher is the lower end of the vibrator over the Earth. Expressions are obtained for the pure and imaginary part of input resistance of an arbitrarily long vertical vibrator. Expressions for input resistance of a vibrator with $l \approx \lambda/2$ are also given.

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S/112/59/000/014/077/085
A052/A001

Input Resistance of a Vertical Vibrator Located Over the Earth's Surface

Diagrams present the dependances of the pure and reactive components of the input resistance (in relation to the corresponding components for free space) of a half-wave vertical antenna on h. These dependances show that the electric parameters of a real surface begin to affect noticeably the resistance of a vibrator at $h \leq 0.25\lambda$. Experimental data agree fairly well with the theoretical conclusions.

V. I. M.

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

DOBROVOL'SKIY, I.G.; ERABICH, V.M.

Antonius Pius' coins from Alexandria with reproduction of zodiac signs. Ist.-astron.issl. no.5:223-229 '59.
(MIRA 12:12)

(Alexandria--Coins, Ancient)

DOBROVOL'SKIY, I. M.

Machines for planting grapevines. Vin. SSSR No 4, 1952.

FEYTSARENKO, A.M.[Feitsarenko, A.M.], otv. red.; PREDKO, I.G.[Predko, I.H.], red.; GRIN'KO, T.F.[Hrin'ko, T.F.], kand. sel'khoz. nauk, red.; DEMCHENKO, P.K., red.; DOBROVOL'SKIY, I.M.[Dobrovols'kyi, I.M.], red.; LIMAR, F.M.[Lymar, F.M.], red.; SEMENOV, F.G.[Semenov, F.H.], FEYTSARENKO, G.I.[Feitsarenko, H.I.], kand. sel'khoz. nauk, red.; VAS'KOVSKIY, Yu.I.[Vas'kovs'kyi, IU.I.], red.; VIDONYAK, A.P. [Vidoniak, A.P.], tekhn. red.

[Sixty years of the Cherkassy (formerly Verkhnyaki) State Agricultural Experiment Station; collection of scientific papers] 60 rokiv Cherkas'koi (kol. Verkhniats'koi) derzhavnoi sil's'kohospodars'koi doslidnoi stantsii; zbirnyk naukovykh prats'. Kyiv, Vyd-vo Ukrains'koi akad. sil's'kohospodars'kykh nauk, 1961. 145 p. (MIRA 15:2)

1. Cherkassy. Derzhavna sil's'kohospodars'ka doslidna stantsiya. 2. Direktor Cherkasskoy gosudarstvennoy sel'skokhozyaystvennoy opytnoy stantsii (for Feytsarenko, A.M.). 3. Zaveduyushchiy otdelom selektsii sakharnoy svekly Cherkasskoy gosudarstvennoy sel'skokhozyaystvennoy opytnoy stantsii (for Grin'ko).

(Continued on next card)

FEYTSARENKO, A.M.---(continued) Card 2.

4. Zaveduyushchiy otdelom obrabotki pochvy Cherkasskoy gosudarstvennoy sel'skokhozyayatvennoy opytnoy stantsii (for Demchenko). 5. Zaveduyushchiy otdelom skotovodstva Cherkasskoy gosudarstvennoy sel'skokhozyaystvennoy opytnoy stantsii (for Limar). 6. Zaveduyushchiy otdelom selektsii zernovykh kul'tur Cherkasskoy gosudarstvennoy sel'skokhozyaystvennoy opytnoy stantsii (for Feytsarenko, G.I.).
(Cherkassy--Agricultural experiment stations)

DOBROVOL'SKIY, I.P.; DONDE, M.V.; NEMIROVSKIY, N.Kh.

Certain problems involved in the planning and operating of pitch coke units. Koks i khim. no.1:33-37 '61. (MIRA 14:1)

1. Chelyabinskiy metallurgicheskiy zavod.
(Chelyabinsk—Coke)

DOBROVOL'SKIY, I.P.; PATRIKEYEVA, L.M.; Prinimali uchastiye: CHERVOV, A.P.; KOSTENKO, A.R.; PARTINA, T.V.

Utilization of pitch distillates for the production of high temperature pitch. Koks i khim. no.4:48-50 '61. (MIRA 14:3)

1. Chelyabinskiy metallurgicheskiy zavod (for Dobrovol'skiy, Patrikeyeva).
(Chelyabinsk—Pitch)

KHOLOPTSEV, V.P.; DOBROVOL'SKIY, I.P.; NEYZHMAK, V.Ye.; DUBOVIK, A.N.

Improved methods for the production of electrode coke. Koks i khim. no.7:29-32 Jl '61. (MIRA 14:9)

1. Chelyabinskiy metallurgicheskiy zavod (for Kholoptsev, Dobrovol'skiy). 2. Koksokhimstantsiya (for Neyzhmak, Dubovik).
(Coke industry)

DOBROVOL'SKIY, I.P.; KOSTENKO, A.R.; CHERVOV, A.P.

Changes in the method of pitch preparation. Koks i khim. no.8: 33-34 '61. (MIRA 15:1)

1. Chelyabinskiy metallurgicheskiy zavod. (Chelyabinsk--Coke ovens) (Pitch)

SHEMERYANKIN, B.V.; KOPELIOVICH, L.V.; DOBROVOL'SKIY, I.P.; OSHCHEPKOVA, N.V.

Studying the formation of the porous structure of pitch coke. Koks i khim. no.3:25-28 '63. (MIRA 16:3)

1. Chelyabinskiy metallurgicheskiy zavod (for Shemeryankin, Kopeliovich, Dobrovol'skiy, I.P.). 2. Gosudarstvennyy nauchno-issledovatel'skiy institut elektrodnoy promyshlennosti (for Oshchepkova).
(Coke)

DOBROVOL'SKIY, I.P.; USTUPNYY, V.A.; AKULOV, P.V.; PRAVDIN, V.N.

Modification of the spraying system for coke quenching. Koks i khim. no.12:25-27 '63. (MIRA 17:1)

1. Chelyabinskiy metallurgicheskiy zavod.

DOBROV)L'SKIY, I.P.

Application of high-speed motion-picture photography in a polarized light for studying stress wave propagation. Usp.nauch.fot. 9:256-257 '64.

(MIRA 18:11)

S/055/60/000/03/07/010

AUTHORS: Dobrovol'skiy, I.P., Kopytov, V.D., and Lyu Guannin

TITLE: Analysis of Contact Pressures of Thick Stamp Plates of a Heavy Stamping Press 14

PERIODICAL: Vestnik Moskovskogo universiteta. Seriya I, matematika, mekhanika, 1960, No. 3, pp. 60-66

TEXT: By models of a transparent optically active material the contact pressures of thick stamp plates were determined experimentally. The experimental results were compared with the results of approximate computing methods. Since the calculations were made under very rough assumptions of approximation, there is only a partial agreement between the experiment and the approximate calculation. Nevertheless the author is of opinion that the usefulness of the approximate methods (Ref.2,3,4,5) is confirmed by the experiments.
There are 7 figures, 3 tables and 5 Soviet references.

ASSOCIATION: Kafedra teorii uprugosti (Department of Theory of Elasticity)

SUBMITTED: September 9, 1959

Card 1/1

DOBROVOL'SKIY, I.P.; KOPYTOV, V.D. (Moskva)

Using the method of photoelasticity in determining contact pressures. Izv.AN SSSR.Otd.tekh.nauk.Mekh.i mashinostr. no.4:154-155 Jl-Ag '60. (MIRA 13:8)
(Photoelasticity)
(Strains and stresses)

86201
S/055/60/000/005/010/010
C111/C222

16.7300

AUTHOR: Dobrovol'skiy, I.P.

TITLE: The Photoelastic Method for Stress Determination by Fringe Patterns

PERIODICAL: Vestnik Moskovskogo universiteta. Seriya I, matematika, mekhanika, 1960, No.5, pp.73-76

TEXT: The difference of the main stresses $m = \sigma_1 - \sigma_2$ in the whole model is determined from the fringe patterns so that

$$(X_x - Y_y)^2 + 4X_y^2 = m^2 \quad (1)$$

becomes an equation with a known right side. If the forces due to inertia equal zero then for the plane model it besides must be:

$$\frac{\partial X_x}{\partial x} + \frac{\partial X_y}{\partial y} = 0 \quad (2)$$

$$\frac{\partial Y_x}{\partial x} + \frac{\partial Y_y}{\partial y} = 0, \quad (3)$$

and

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The Photoelastic Method for Stress Determination by Fringe Patterns

(4) $\nabla^2\sigma = 0,$

where $\nabla^2 = \frac{\partial^2}{\partial x^2} + \frac{\partial^2}{\partial y^2}$, $\sigma = X_x + Y_y$. If O_x is the axis of symmetry then on it $X_y = 0$, and from (1) it follows $X_x - Y_y = m$. Eliminating $X_x + Y_y$ from (2)+(3) with the aid of (4) and (1) then one obtains for $\beta = \frac{\partial X_y}{\partial y}$

(5) $$4\frac{\partial\beta}{\partial x} = -4\frac{\beta^2}{m} + \frac{\partial^2 m}{\partial y^2} - \frac{\partial^2 m}{\partial x^2}.$$

If β is determined from (5) then from (2) it follows that $X_x = X_{x_0} - \int_{x_0}^{x} \beta\, dx$.

In the singular point (for m=0) $\frac{\beta^2}{m}$ changes to zero, and (5) assumes the form

(6) $$4\frac{\partial\beta}{\partial x} = \frac{\partial^2 m}{\partial y^2} - \frac{\partial^2 m}{\partial x^2}.$$

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S/055/60/000/005/010/010
C111/0222

The Photoelastic Method for Stress Determination by Fringe Patterns

The application of the equations (5) and (6) with the transition to the difference equation is discussed by the example of a disk compressed by two single forces; the author determines the distribution od stresses along a diameter perpendicular to the line of action of force. There are 3 figures and 2 references: 1 Soviet and 1 English.

ASSOCIATION: Kafedra teorii uprugosti (Chair of Theory of Elasticity)

SUBMITTED: December 12, 1959

Card 3/3

S/110/61/000/002/002/009
E194/E455

AUTHORS: Dobrovol'skiy, I.P., Engineer, Kartashkin, B.A., Engineer, Kopytov, V.D., Engineer, Skoryy, I.A., Candidate of Physical and Mathematical Sciences

TITLE: An Investigation by the Photo-Elasticity Method of the Stresses in the Assemblies Used to Fix the Active Steel in Hydro-Alternators

PERIODICAL: Vestnik elektropromyshlennosti, 1961, No.2, pp.8-13

TEXT: The assemblies used to secure the stator cores in hydro-alternators sometimes fail, principally near the welds. The assembly is loaded by the radial magnetic attraction of the poles and by tangential forces due to electromagnetic torque. The ratio of these loadings is different under different conditions and as yet sufficiently reliable methods of determining them do not exist. These loadings and the places of highest stress are usually determined by full-scale tests on assemblies, using strain gauges. The location of the strain gauges is selected arbitrarily. For accurate design it is necessary to determine separately the stresses due to the axial and radial loading so as to assess their

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combined action. Then when full-scale tests are made, the strain gauges can be placed at the most significant points. It is also important to determine the stress distribution in the thickness of the rings that support the keying ribs. Stress changes resulting from alterations in the rigidity of the joints are also important. It is not possible to study all these problems by means of full-scale tests. Accordingly, tests were made by the photo-elasticity method, using transparent models in polarized light. This method is effective for determining the stress distribution over the whole rangeand, moreover, no initial stresses are introduced in the manufacture of the models which could distort the results. The principles of the photo-elastic methods of stress determination are briefly explained. It is noted that, if the models are heated under load to a temperature of 100 to 150°C and then slowly cooled under load to room temperature, the stress condition may be retained in the model and is not altered when it is sectioned. By this means, the sections may be studied to determine the stress distribution throughout the body of the model. This method was used in making

the study. Fig.1 shows a model of a fixing assembly consisting of a support ring 1 which is fixed to the stator frame of the alternator, a block 2 welded to the ring and a keying rib 3 welded to the block. In an actual machine there are several rings but, to avoid difficulties in modelling, only an individual assembly was studied. The model was made on a scale of 1/5. To study the influence of assembly rigidity, three methods of fixing were used. In the first, the ring and keying rib were made in one solid piece; in the second and third, the assemblies were made of separate parts stuck together to imitate welds of different kinds. Each of the models was tested under radial and tangential loading applied mechanically; stresses were determined at four sections. Curves of equal slope of main stresses (isoclines) and trajectory of main stresses (isostats) were constructed. The differences in the principal stresses were determined along the selected sections: by integration of the equilibrium equation, the detailed stress distribution was determined. With radial loading, stress concentrations were observed in sections of the ring close to the

keying rib in the region between the welded joints. As the distance from the wedge increases, the distribution of stress over the ring thickness becomes more uniform. With tangential loading the stress distribution did not depend much on the method of constructing the model. Stress peaks are observed in places near the side faces of the block. Here, all three stresses are considerable and should be allowed for in assessments of strength. The results obtained by the photo-elasticity methods were compared with strain gauge test results on radially-loaded models fabricated in metal and annealed before test to remove remanent stresses. The stress distributions obtained by the two methods were compared. By the photo-elasticity method, the conditions of equilibrium are fulfilled to within 6 to 7%, whereas the tests on metal models in the corresponding sections indicate that the conditions of equilibrium are fulfilled to within 40%. The difference is due to bending of the rings that occurs in the tests on the metal models. Because of the test conditions, most of the strain gauges are fixed to one side of the ring. A few gauges

fixed on the other side demonstrated the presence of bending, which altered the stress distribution by 20 to 30% as compared with uniform distribution throughout the thickness. Because of the small number of strain gauges on the lower side, it was not possible to make allowance for bending when the results were worked out. It should be noted that when stresses are determined on a transparent model, the method is such that the measured stresses are averaged out over the thickness of the ring and the results are not affected by bending. It is possible to calculate the stress distribution for the case of radial loading; experimental and calculated values are compared; there are certain differences for which an explanation is offered. On consideration of the general picture of stress distribution under the influence of radial and tangential loads, as determined by the photo-elasticity method, certain recommendations may be made for full-scale testing. If the strain gauges are fixed on the axis of symmetry of the block, where the stresses are only due to the action of radial forces, the magnitude of the radial force may

readily be calculated. With this knowledge, it is possible to calculate the stresses due to radial loading in the ring on both sides of the axis of symmetry of the block. Then, if strain gauges are fitted in these places, it is possible to obtain the stress distribution due to tangential loading by subtracting from the total stress the stress due to radial loading. Here, it is of considerable assistance to note that the stress distribution due to tangential loading is obliquely symmetrical. Hence, by adding together the indications of two symmetrically-located strain gauges, its effect may be neutralized and the stress due to the radial force may be determined more accurately. Strain gauges for measuring stress should be fixed to the ring at a distance from the block of not less than 1.5 times the thickness of the ring. At this distance, the influence of irregularities in the stress distribution within the thickness of the ring will be without effect. It is also advisable to fix check strain gauges on the opposite side of the ring, to exclude errors that may be introduced by bending. The tests by the photo-elasticity

S/110/61/000/002/002/009
E194/E455

An Investigation by the Photo-Elasticity Method ...

method were made by the Laboratoriya opticheskogo metoda issledovaniya napryazheniy (Laboratory for the Optical Method Research of Stresses) MGU jointly with the section for dynamic research of Laboratoriya elektricheskikh mashin (Laboratory for Electrical Machinery) VNIIE, and those by the strain gauge method by the above named laboratory of VNIIE at the Institut elektrosvarki imeni O.Ye.Patona (Electric Welding Institute imeni O.Ye.Paton). There are 11 figures.

SUBMITTED: March 17, 1960

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S/110/61/000/002/002/009
E194/E455

An Investigation by the Photo-Elasticity Method ...

Fig.1.

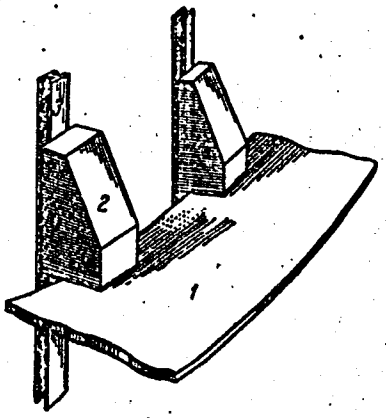


Рис. 1. Схема конструкции узла крепления

Card 8/8

DOBROVOL'SKIY, I.P. (Moskva); KOPYTOV, V.D. (Moskva)

Determining contact pressures on three-dimensional models. Inzh. zhur. 1 no.4:172-174 '61. (MIRA 15:4)
(Strains and stresses)

L 12012-66 EWT(d)/EWT(l)/EWT(m)/EWP(w)/EWP(j)/T/EWA(c) IJP(c) WW/EM/RM

ACC NR: AT6001413 SOURCE CODE: UR/3180/64/009/000/0256/0257

AUTHOR: Dobrovol'skiy, I.P.

ORG: None

TITLE: The application of high-speed motion picture photography in polarized light for the study of stress wave propagation

SOURCE: AN SSSR. Komissiya po nauchnoy fotografii i kinemtografii. Uspekhi nauchnoy fotografii, v. 9, 1964. Vysokoskorostnaya fotografiya i kinematografiya (High-speed photography and cinematography), 256-257 and appropriate insert following page 256

TOPIC TAGS: high speed photography, photoelasticity, stress analysis, motion picture photography/FP 22 motion picture camera

ABSTRACT: The note describes photoelastic dynamic tests carried out at the Department of Elasticity Theory, Mechanics-Mathematics Faculty, MGU (Kafedra teorii uprugosti Mekhaniko-matematicheskogo fakul'teta MGU). The experimental setup using an FP-22 high-speed motion picture camera is shown in Fig. 1. Studies of the styrolalkyd and epoxy resins showed that a 200 to 300 fold decrease in the modulus of elasticity is accompanied by a 3 - 6 fold decrease in stress wave velocity rather than 14 - 17 fold as expected according to the elementary theories of stress wave propagation. The discrepancy seems to be due to the influence of the Poisson coefficient (which at 120 - 140C is about 0.5) which is not taken into account by elementary theory. Orig. art. has: 1 figure.

Card 1/2

L 12012-66
ACC NR: AT6001413

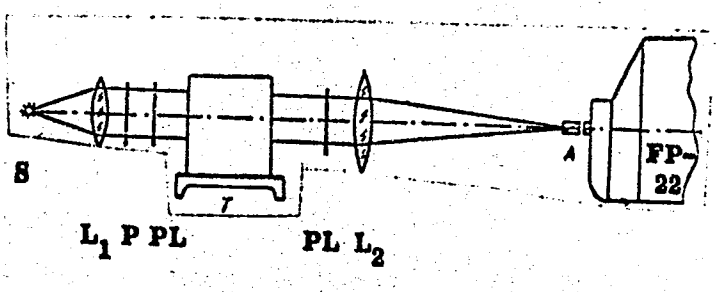
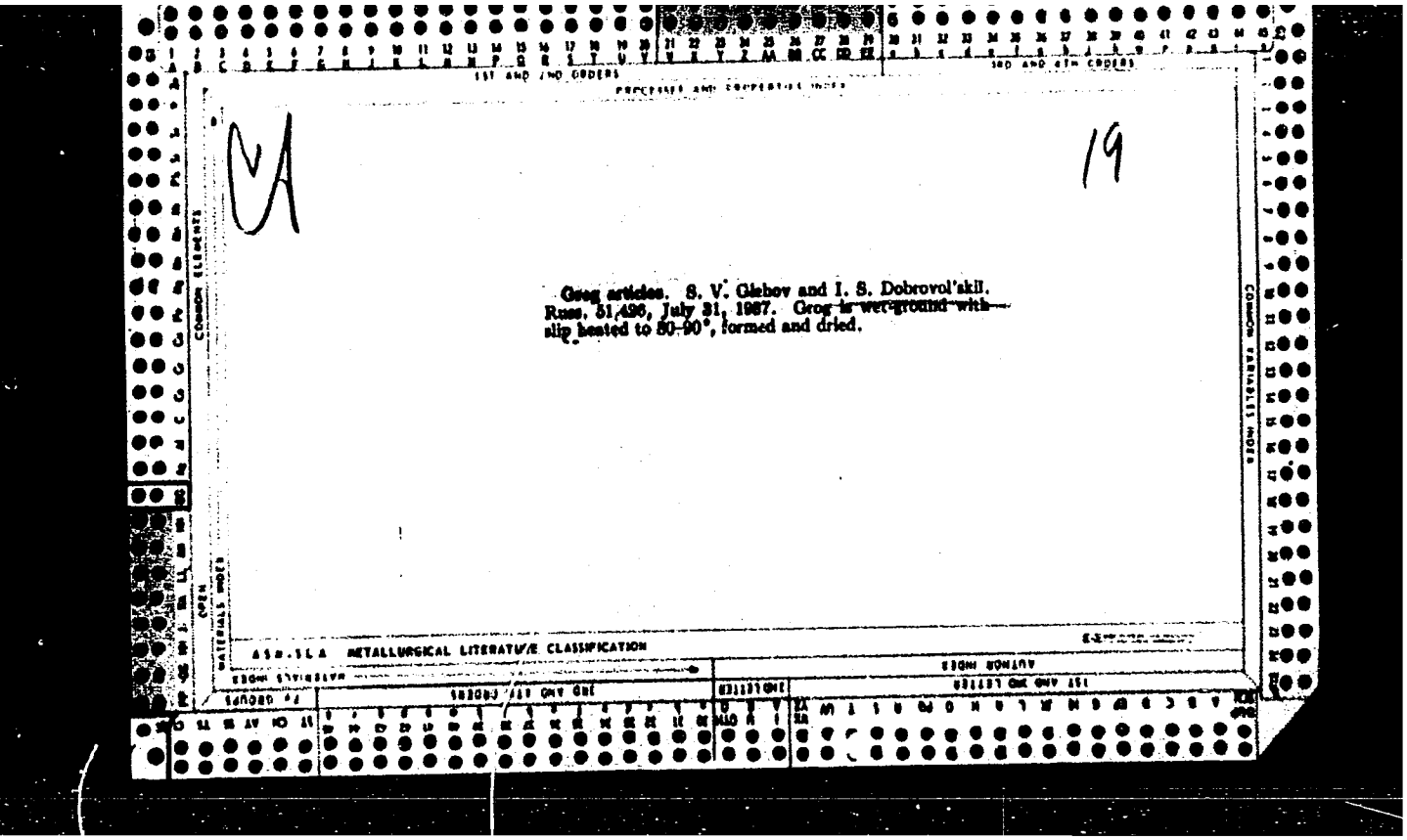


Fig. 1. Diagram of the setup.
S - light source;
L_1, L_2 - lenses;
P - polarizer;
PL - quarter wave plates;
A - analyzer;
T - thermostat with load application device.

SUB CODE: 14,20 / SUBM DATE: none

Card 2/2

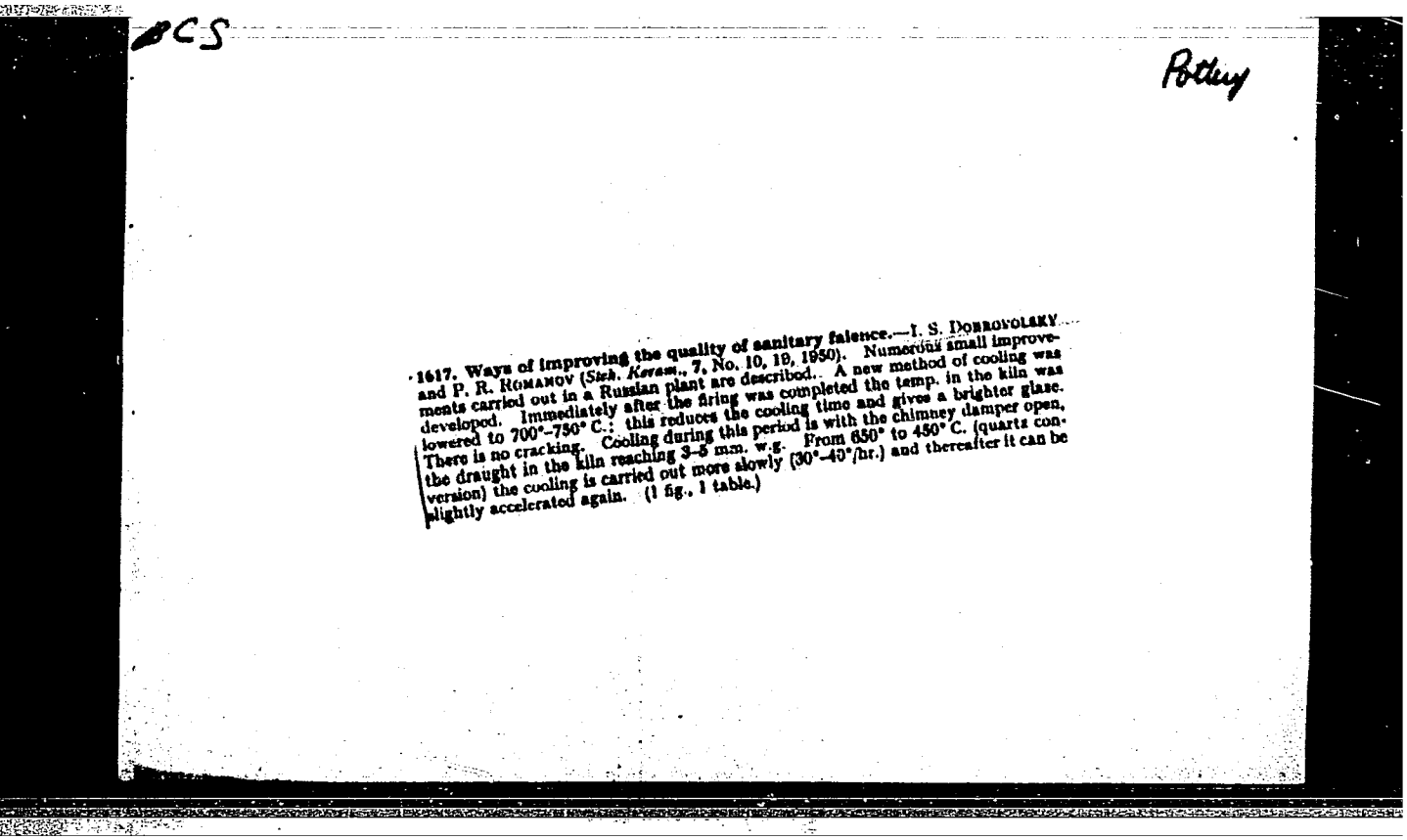


Grog articles. S. V. Glebov and I. S. Dobrovol'skii. Russ. 51,496, July 31, 1957. Grog is wet-ground with slip heated to 80-90°, formed and dried.

BCS

Ceramic Products
Pottery

1076. A new type of porous ceramic material.—I. S. Dobrovolsky and K. A. Smirnova (*Sbd. Keram.*, 7, No. 8, 18, 1950). Some essential branches of industry require filters for cleaning the air and gases; the cement, Al, talc, chem. and other industries need porous products for the pneumatic transport of powdered materials; yeast factories and hydrolyzing plants use porous products as so-called "candles" for aeration. The oxygen industry uses a great variety of filters for cleaning the liquid air from the solid CO_2 and from the dust of the adsorbants, and the liquid O_2 from graphite dust. The N_2 industry needs porous pipes for the filtration of air in the production of nitric acid. The products must be manufactured from a highly permeable and porous material (porosity 40–50%). Each type of product must meet certain requirements for permeability, porosity and pore size. It is stated that a simple and very cheap method of manufacturing such products has been developed in Russia, the main initial materials being quartz sand and liquid glass. The method consists in the selection of a suitable grading followed by bonding with the correct amount of liquid glass to coat the sand grains. The technology of manufacture consists in mixing the initial materials, shaping in a press or on a vibrating table, and firing at 900°–950° C. Some notes are given on the manufacture of Aerolite plates, filters for the cleaning of air from dust and oil, and filters for oxygen plants. Some properties of porous products are tabulated. (3 figs., 2 tables.)



BCS

Pottery

1617. **Ways of improving the quality of sanitary faience.**—I. S. DOBROVOLSKY and P. R. ROMANOV (*Steklo. Keram.*, 7, No. 10, 19, 1950). Numerous small improvements carried out in a Russian plant are described. A new method of cooling was developed. Immediately after the firing was completed the temp. in the kiln was lowered to 700°–750° C.: this reduces the cooling time and gives a brighter glaze. There is no cracking. Cooling during this period is with the chimney damper open, the draught in the kiln reaching 3–5 mm. w.g. From 650° to 450° C. (quartz conversion) the cooling is carried out more slowly (30°–40°/hr.) and thereafter it can be slightly accelerated again. (1 fig., 1 table.)

BCS

Drying

2175. **Experience with the combined grinding and drying of clay.**—V. L. BALKEVICH, I. S. DOBROVOLSKY and R. M. ZAVONTS (*Stek. Keram.*, 8, No. 2, 12, 1951). It is stated that the dry-pressing method has been very successful in Russia. New presses produce 4,000–10,000 building bricks/hr. In the plants utilising the wet-pressing method clay is normally dried in Russia in drum dryers and ground in disintegrators or edge-runner mills. Experience over a year has shown that the drum does not dry clay uniformly. A Russian institute has built and tried out an installation for the simultaneous grinding and drying of clay and this is described. (2 figs., 4 tables.)

TOROPOV, N.A.; DOBROVOL'SKIY, K.A.

Effect of sodium and potassium oxides on the mineralogical composition of portland cement clinker. Izv. AN SSSR. Neorg. mat. 1 no.5:769-774 My '65. (MIRA 18:10)

1. Institut khimii silikatov imeni Grabenshchikova AN SSSR.

L 13096-66 EWT(1)/EWA(j)/T/EWA(b)-2 JK

ACC NR: AP6006641 SOURCE CODE: UR/0016/65/000/001/0057/0060

AUTHOR: Aleksandrov, N. I.; Gefen, N. Ye.; Dobrovol'skiy, K. F.; Yezepchuk, Yu. V.; Lebedinskiy, V. A.; Mikhaylov, B. Ya.; Rumova, V. F.; Seregina, A. I.; Filippenko, A. I.

ORG: none

33
B

TITLE: Immunogenicity of chemical anthrax vaccine tested in sheep

SOURCE: Zhurnal mikrobiologii, epidemiologii i immunobiologii, no. 1, 1965, 57-60

TOPIC TAGS: vaccine, immunology, anthrax

ABSTRACT: The authors improved the chemical anthrax vaccine that they had developed several years before. Single as well as double inoculations of sheep produced immunity to infection from 100 Dcl of virulent anthrax bacillae. Further research is needed to determine the minimal immunizing dose for sheep and the duration of the immunity. Orig. art. has: 3 tables. [JPRS]

SUB CODE: 06 / SUBM DATE: 29Jun63 / ORIG REF: 003 / OTH REF: 008

Card 1/1 KW

UDC: 616.981.51-085.372-036.8-092.9

DOBROVOL'SKIY, K. I.

Izucheniye svoystv lessovykh gruntov Sb. "Stroitel'stvo na lessovidnykh gruntakh" Stroyizdat 1939

ALEKSANDROV, N.I.; GEFEN, N.Ye.; DOBROVOL'SKIY, K.F.; YEZEPCHUK, Yu.V.; LEBEDINSKIY, V.A.; MIKHAYLOV, B.Ya.; RUNOVA, V.F.; SEREGINA, A.I.; FILIPPENKO, A.I.

Immunogenicity of chemical anthrax vaccine in experiments on sheep. Zhur. mikrobiol., epid. i immun. 42 no.1:57-60 Ja '65.
(MIRA 18:6)

DOBROVOLSKIY, L. A., (USSR)

"Some Features of the Denaturation Changes in Body Proteins Associated with the Effects of Different Temperatures and Temperature Changes."

Report presented at the 5th Int'l. Biochemical Congress, Moscow, 10-16 Aug 1961.

BARIYEV, Nazim Vafinovich; DOBROVOL'SKIY, Lev Alekseyevich; SEDAKOV, Leonid Vasil'yevich; RADIN, V.I., red.; BUL'DYAYEV, N.A., tekhn. red.

[Amplidyne amplifiers]Elektromashinnyi usilitel' poperechnogo polia. Moskva, Gosenergoizdat, 1962. 55 p. (Biblioteka elektromontera, no.80) (MIRA 16:6)
(Rotating amplifiers)

DOBROVOL'SKIY, L.A.

Changes in protein metabolism during the prolonged action of a high temperature. Gig. i san. 26 no.6:25-28 Je '61. (MIRA 15:5)

1. Iz Kiyevskogo instituta gigiyeny truda i professional'nykh zabolevaniy.
(HEAT—PHYSIOLOGICAL EFFECT) (PROTEINS METABOLISM)

NAUMOV, I.K., kand. tekhn. nauk; DOBROVOL'SKIY, L.A., gornyy inzhener; CHAYANOV, V.A., gornyy inzhener

Problems in the over-all automatic control of an open-pit mine. Nauch. trudy Mosk. inst. radioelek. i gor. elektromekh. no.46: 24-29 '62. (MIRA 17:1)

TROP, Abram Yefimovich, doktor tekhn. nauk; ARSHINSKIY, Vadim Mefod'yevich, kand.; DOBROVOL'SKIY, L.A., retsenzent;

[Electrical equipment and automation of concentrating plants] Elektrooborudovanie i avtomatizatsiia obogatitel'nykh fabrik. Izd.3., perer. i dop. Moskva, Izd-vo "Nedra," 1964. 369 p. (MIRA 17:6)

DOBROVOL'SKIY, L. A. (Kiyev)

Changes in the protein fractions of the blood serum under the influence of temperature drops and their hygienic significance. Gig. truda i prof. zab. no.2:19-26 '62. (MIRA 15:2)

(BLOOD PROTEINS) (TEMPERATURE--PHYSIOLOGICAL EFFECTS)

DOBROVOL'SKIY, L.A., kand. med. nauk

Changes in the sex cycle and the dynamics of radioactive phosphorus (P^{32}) concentration in the ovaries following repeated entering of small quantities of the isotope into the body; experimental research. Akush. i gin. 40 no.5:153-154 S-O '64. (MIRA 18:5)

1. Kiyevskiy institut gigiyeny truda i professional'nykh zabolevaniy (dir. - prof. L.I.Medved').

L 56544-65

ACCESSION NR: AP5010361 UR/0205/65/005/002/0310/0311

AUTHOR: Khvoynitskaya, M. A.; Dobrovol'skiy, L. A.; Likhtarev, I. A.

TITLE: Differences in radiophosphorus effective half-life kinetics [illegible] multiple administration [illegible]

SOURCE: Radiobiologiya, v. 5, no. 2, 1965, 310-311

TOPIC TAGS: animal, mouse, phosphorus-32, single dose, fractional [illegible] effective half-life

ABSTRACT: The first of two experimental groups of white mice weighing [illegible] received a single subcutaneous injection of P^{32} [illegible]

[illegible] method [illegible] calculated effective half-life [illegible] to be considerably higher than experimental findings. Whereas the [illegible] concentration in the ovary for a single P^{32} dose was 1.5% of initial [illegible]

Card 1/2

L 56544-65

ACCESSION NR: AP5010361

and effective half-life was 5.5±1 days, corresponding values for the chronic P^{32} dose were 0.77 μg and 3.3 days. No explanations for the significant differences in P[illegible] kinetics in the ovaries are offered. [illegible] figures and 3 formulas.

ASSOCIATION: Kiyevskiy nauchno-issledovatel'skiy institut gigiyeny truda i profzabolevaniy (Kiev Scientific-Research Institute of Labor Hygiene and Occupational Diseases)

SUBMITTED: 10Jun63 ENCL: 00 SUB CODE: [illegible]

NR REF SOV: 002 OTHER: 000

Card 2/2

DOBROVOL'SKIY, L. A.

Electric prospecting in the search for underground waters under complex geological conditions. Izv. vys. ucheb. zav.; geol. i razv. 7 no.12:110-115 D '64. (MIRA 18:12)

DOBROVOL'SKIY, L.G.

Calculating the jointing of rail lengths. Put' i put.khoz. 4 no.10:8 O '60. (MIRA 13:9)

1. Nachal'nik proizvodstvenno-tekhnicheskogo otdela putevoy mashinnoy stantsii st.Chany, Omskoy dorogi.
(Railroads--Maintenance and repair)

DOBROVOL'SKIY, L.G., kand.filosof.nauk; MIKHNO, L.S., kand.med.nauk (Khar'kov)

Significance of Lenin's ideas for the development of the natural sciences, especially medicine. Vrach.delo no.4:343-347 Ap '60. (MIRA 13:6)

(LENIN, VLADIMIR IL'ICH, 1870-1924)

DOBROVOL'SKIY, L.G. [Dobrovol's'kyi, L.H.]

Modern electronic calculating machines and the mental activity of man. Fiziol.zhur.Ukr. 6 no.4:450-458 Jl-Ag '60.
(MIRA 13:7)

1. Kafedra filosofii Politekhnicheskogo instituta, Khar'kov.
(CYBERNETICS)

DOBROVOL'SKIY, L.YE.

Problemy gruzooborota Bol'shoi Volgi. [The problem of freight traffic of the Greater Volga]. (Vodnyi transport, 1940, no. 10, p. 4-7). DLC: HE561.R8

SO: SOVIET TRANSPORTATION AND COMMUNICATIONS, A BIBLIOGRAPHY, Library of Congress, Reference Department, Washington, 1952, Unclassified.

DOBROVOL'SKIY, L.YE.

Polnist'iu ispol'zovat' ekonomicheskie preimushestva rechenogo transporta v nefteper-
vozkahk. [To use the economic advantages of river transportation for iol shipment].
(Rechnoi transport, 1950, v. 10,no. 6, p. 4). DLC: TC601.R4

SO: Soviet Transportation and Communications, A Bibliography, Library of Congress Reference Department, Washington, 1952. Unclassified.

KOVALEV, Aleksandr Ivanovich; PALKIN, A.K., retsenzent; DOBROVOL'SKIY, L.Ye., retsenzent; SOLOV'YEV, I.V., red.; LOBANOV, Ye.M., red. izd-va; YERMAKOVA, T.T., tekhn.red.

[Improvement of the use of navigable canals for transportation] Uluchshenie transportnogo ispol'zovaniia sudokhodnykh kanalov. Moskva, Izd-vo "Rechnoi transport," 1958. 49 p. (MIRA 12:2)
(Inland water transportation)

DOBROVOL'SKIY, M. [Dobrovol's'kyi, M.], kand.tekhn.nauk; KRYLOV, Yu., kand.tekhn.nauk

Tamed fire. Nauka i zhyttia 12 no.11:12-13 N '62. (MIRA 16:1)
(Rockets (Aeronautics))

DOBROVOL'SKIY, M., starshiy inzhener

Mechanization of interfarm brick and tile factories.
Sel'.stroi. 15 no.7:14-15 Jl '60. (MIRA 13:8)

1. Upravleniye stroitel'stva Nikolayevskogo oblastnogo upravleniya sel'skogo khozyaystva.
(Collective farms--Interfarm cooperation)
(Brickmaking machinery)
(Tiles)

DOBROVOL'SKIY, M. [Dobrovol's'kyi, M.]

Efficient mechanization of interfarm brick and tile factories. Sil'. bud. 11 no.1:17-19 Ja '61. (MIRA 14:3)

1. Starshiy inzh.upravleniya stroitel'stva Nikolayevskogo oblsel'khoz-upravleniya.
(Ukraine—Brick industry)

DOBROVOL'SKIY, M. [Dobrvol's'kyi, M.]

Production of clay grooved tiles by the ribbon method. Sil'.bud. 13 no.5:13 My '63. (MIRA 17:3)

1. Nachal'nik otdela stroitel'nykh materialov Nikolayevskoy oblastnoy mezhkolkhoznoy stroitel'noy organizatsii.

DUNAYEV, F.; DOBROVOL'SKIY M.

Collection of works of the All-Union Petroleum Scientific Research Institute for Geological Survey: "Economic Efficiency of Prospecting." Geol. nefti i gaza 8 no.5:49-52 My '64. (MIRA 17:9)

DOBROVOL'SKIY, M.B.

GORNLIK, Ya.M.; DOBROVOL'SKIY, M.B.; RUBIN, S.B.; KANEVSKAYA, M.D., red.; KARYAKINA, M.S., tekhn.red.

[Concise dictionary of terms and definitions in the fields of atomic energy, atomic weapons, and atomic defense] Kratkii slovar' nekotorykh terminov i opredelenii po atomnoi energii, atomnomu oruzhiiu i protivoatomnoi zashchite. Moskva, Izd-vo DOSAAR, 1958. 61 p. (MIRA 11:4)

(Atomic energy--Dictionaries)

DUNAYEV, F.F.; DOBROVOL'SKIY, M.B.; YEGOROV, V.I.; PAVLINICH, E.A.

Economic efficiency of oil prospecting and some ways for increasing it. Trudy MINKHiGP no.49:3-22 '65.

(MIRA 18:8)

DOBROVOL'SKIY, M.B.

Effect of some factors of the distribution of petroleum reserves on the efficient ratio between the reserves and their production. Izv. vys. ucheb. zav.; neft' i gaz 5 no.3:115-119 '62. (MIRA 16:8)

1. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti imeni akademika I.M. Gubkina.

DUNAYEV, F.F.; KOZLOV, P.T.; DOBROVOL'SKIY, M.B.

Indices of the economic effectiveness of oil prospecting and means for improving them. Izv.vys.ucheb. zav.;neft' i gaz 5 no.5: 113-117 '62. (MIRA 16:5)

1. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti imeni akademika I.M.Gubkina.
(Petroleum geology)

DOBROVOL'SKIY, M.B.; DUNAYEV, F.F.; YEGOROV, V.I.

Comparative measurement of petroleum reserves of various categories. Izv.vys.ucheb.zav.; neft' i gaz 5 no.12:107-110 '62. (MIRA 17:4)

1. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti imeni akademika Gubkina.

DOBROVOL'SKIY, M.B.

Economic significance of the classification of oil reserves.
Trudy MINKHiGP no.49:23-40 '65. (MIRA 18:8)

DOBROVOL'SKII, M.F.

Determination of zinc in water. M. F. Dobrovol'skii, V. I. Korolevs, and P. M. Kozarezenko (Med. Inst., [illegible]). *Gigiena i Sanit* 21, No. 9, 43-4(1956). —
[illegible] on formation [illegible]

DeBrovel'skii, M.F.

7

[illegible] determination of zinc in [illegible] waters

[illegible]

9 and combine the HCl soln. with NH_4OH, evap. almost to dryness, and det. Zn polarographically. M. Hoseh

Dobrovol'skiy, M.I.

DOBROVOL'SKIY, M.I. (Rostov-na-Donu).

Using the Russian commercial abacus in grade 9 algebra classes.
Mat. v shkole no.2:65 Mr-Ap '58. (MIRA 11:2)
(Abacus)

16.6100

S/044/61/000/012/032/054
C111/C333

AUTHOR: Dobrovol'skiy, M. N.

TITLE: On the solution of a system of recurrent equations

PERIODICAL: Referativnyy zhurnal, Matematika, no. 12, 1961, 65, abstract 12B276. ("Uch. zap. Tul'sk. gos. ped. in-t", 1960, vyp. 7, 220-223)

TEXT: The author determines the number of permutations $f(n,l)$ of the elements of the pairs $a_1, a_2; b_1, b_2; \ldots; k_1, k_2$ in which the elements 1 of the pairs stand side by side. It is proved that the probability of such permutations has the limit value $\sigma(l) = e^{-1}/l!$, i. e. that $\lim \frac{f(n,l)}{(2n)!} = e^{-1}/l!$.

[Abstracter's note: Complete translation.]

/B

Card 1/1

BOGATSKIY, V.V., otv. red.; GOR'KIY, Yu.I., red.; DOBROVOL'SKIY, M.N., red.; KOROPETS, I.P., red.; KURTSERAYTE, Sh.D., red.; PEL'TEK, Ye.I., red.; FAYNBERG, F.S., red.; KHAZAGAROV, A.M., red.; SHESTAKOV, Yu.G., red.; LIFSHITS, L., red.

[Geology and geochemistry of the mineral resources of Krasnoyarsk Territory] Geologiia i geokhimiia poleznykh iskopaemykh Krasnoiarskogo kraia; sbornik statei. Krasnoiarsk, Krasnoiarskoe knizhnoe izd-vo, 1964. 197 p. (MIRA 18:9)

1. Krasnoyarskaya kompleksnaya ekspeditsiya.

DOBROVOL'SKIY, M.O. [Dobrovols'kyi, M.O.]

Machine for baling hemp stalks. Leh. prom. no.2:38-39 Ap-Je '64
(MIRA 17:7)

USSR/Cultivated Plants - Fruits. Berries. M

Abs Jour : Ref Zhur Biol., No 12, 1958. 53838

Author : Dobrovol'skiy, M.P.
Inst :
Title : Rejuvenation of Old Vineyards

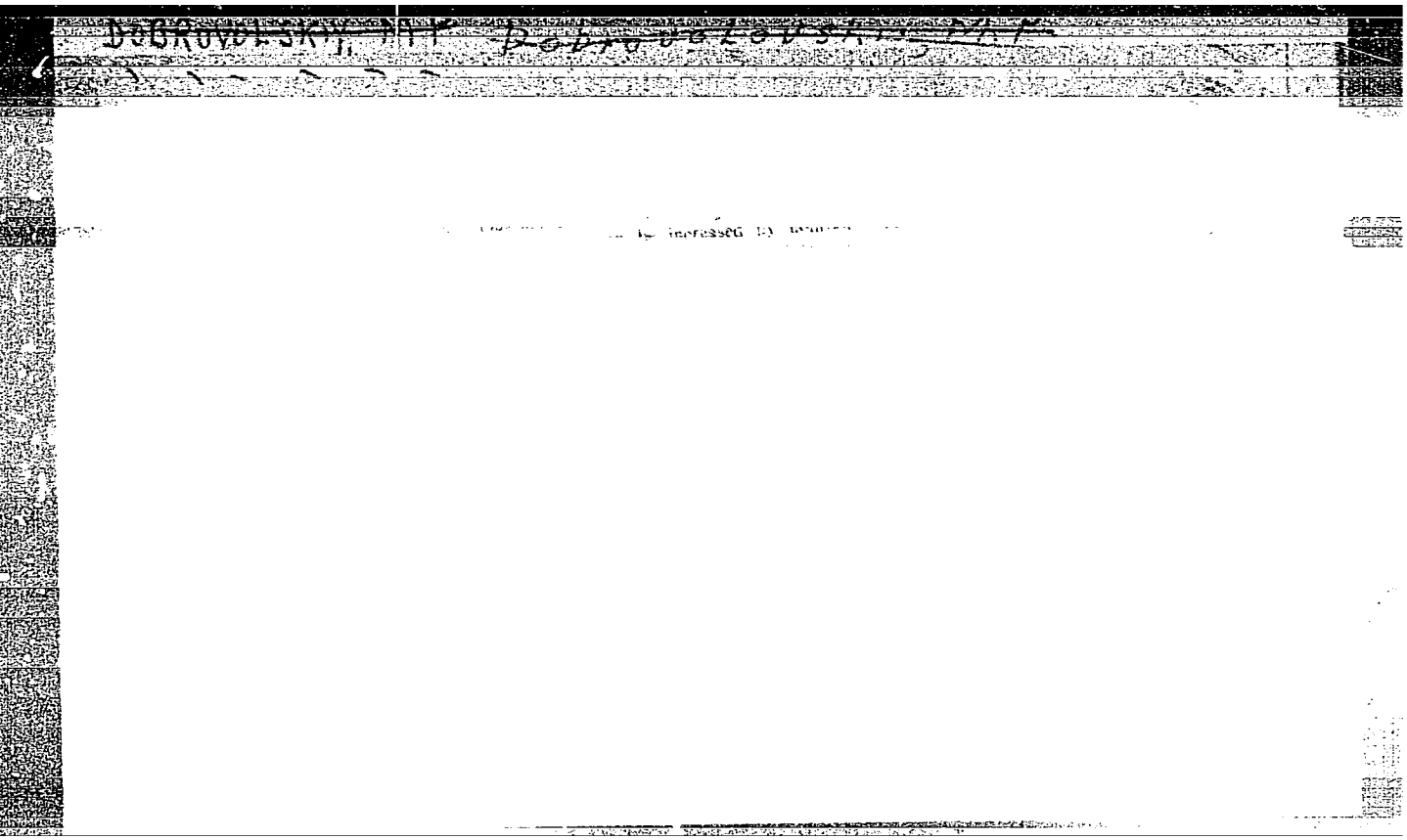
Orig Pub : Sadovodstvo, vinogradarstvo i vinodeliye Moldavii, 1956, No 3, 10-12

Abstract : The method of restoring the plant through branch formation from thick runners and their suckers was used for the rejuvenation of old vineyards on the Ul'yanov Sovkhoz in the Odesskaya Oblast'. For the experiment, a plot (1.8 ha area) of Senso variety of the 1924-1925 planting was taken. The yield of this planting dropped to 3-3.75 cwt/ha as the result of branch injuries. Prior to rejuvenation, the restoration of the planting (70-75 cm) was carried out and mineral fertilizers (200 kg N_{aa} and 700 kg P_c per Ha) were applied. The old injured branches

Card 1/2

Abs Jour : Ref Zhur Biol., No 12, 1958, 53838

were cut from the well cleared top of the plant. During vegetation, the weak plants were given a supplementary dressing of liquid manure in the hole at the rate of 100 g P_c and 60 g N_{aa} to 10 liters of water per plant. 10 tons of humus and 500 kg of P_c per 1 ha were applied in fall. In spring, a large number of runners appeared; their tops were pinched off in order that each of the shoots developed 3-4 suckers. The suckers became fruit shoots and they were pinched several times during the summer which speeded up the formation of the arms. -- Ye.T. Zhukovskaya



USSR/Cultivated Plants. Fruits. Berries. II

Abs Jour : Ref Zhur-Biol., No 15, 1958, 68372

Author : Dobrovol'skiy, M. I.
Inst :
Title : Supplementary Sleeves to Eliminate Grapevine Sparsity.

Orig Pub : Sadovodstvo, vinogradarstvo, i vinodeliye Moldavii, 1957, No 2, 20

Abstract : No abstract.

Card : 1/1

M

COUNTRY : USSR
CATEGORY : Cultivated Plants. Fruits. Berries.

ABS. JOUR. : RZhBiol., No. 23 1958, No. 104818

AUTHOR : Dobrovol'skiy, M. P.
INST.
TITLE : Topdressing Grapes.

ORIG. PUB. : Grediniritul, viyeritul shi vineritul Moldovey, Sadovodstvo, vinogradarstvo i vinodeliye Moldavii, *)

ABSTRACT : At the Sovkhoz imeni Ul'yanov (Odessa oblast'), the topdressing of the following varieties was carried out before blossoming: Muscat Hamburg (affected with oleistogamy and forming a large proportion of pea-size berries), Madelaine Oberlen and Chasch (as cross pollinators, poorly pollinated and producing a low yield). The composition of the supplementary feeding: 100 g of P_2, 20 g of K_2, 50 g of N_a, 1 g of boric acid and 2 g of

*) 1957, No. 3, 8-10

CARD: 1/2

COUNTRY :
CATEGORY :

M

ABS. JOUR. : RZhBiol., No. 1958, No. 104818

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : ammonium molybdate to 10 liters of 1.5% Bordeaux mixture. Considerable increase in the yield was noted when the topdressing was accompanied by supplementary pollination. -- R. I. Serebryannyy

CARD: 2/2

DOBROVOL'SKIY, M.V.

*
Sinyarev, Gennadiy Borisovich

Zhidkostnyye raketnyye dvigateli; teoriya i proyektirovaniye [Liquid fuel rocket engines; theory and design, by] G.B.S'nyarev i M.V. Dobrovol'skiy. Moskva, Oborongiz, 1955.

v. illus., diagrs., tables.
Includes bibliographies.
Lib. has: 1955
1957 (2.Izd.)

DOBROVOL'SKIY, MSTISLAV VLADIMIROVICH PHASE I BOOK EXPLOITATION 351

Sinyarev, Gennadiy Borisovich and Dobrovol'skiy, Mstislav Vladimirovich

Zhidkostnyye raketnyye dvigateli; teoriya i proyektirovaniye (Liquid Propellant Rocket Engines; Theory and Design) 2d ed., rev. and enl. Moscow, Oborongiz, 1957. 579 p. Number of copies printed not given.

Reviewer: Panichkin, I. A., Doctor of Technical Sciences, Professor; Ed.: Senichkin, G. V., Engineer; Ed. of Publishing House: Petrova, I. A., Tech. Ed.: Zudakin, I. M.; Managing Ed.: Sokolov, A. I., Engineer

PURPOSE: This book was written as a textbook for tekhnikums, but may also be useful to students in institutions of higher learning and to workers specializing in the field of rocket engineering.

COVERAGE: The basic textbook on liquid propellant rocket engines is divided into two parts. Part one is concerned with "Theory and Thermodynamic Calculation of Liquid Propellant Rocket Engines" where fundamentals of thermodynamics and Thermo-chemical analysis of the propellant are extensively presented. Part two deals with the "Design of Liquid Propellant Rocket Engines." The authors describe fundamental theories of liquid propellant

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rocket engines and the design of their basic components. They provide the necessary data for the analyzing thrust and for determining the principal dimensions of various accessories and assemblies of liquid propellant rocket engines. Examples of the application of calculation methods are given. The book covers a considerable number of subjects, pertaining to rocket engine design and describes some equipment. A number of scientists who developed rocket propulsion in the USSR are mentioned. Recent developments in the study of complex phenomena occuring in liquid propellant rocket engines have made necessary the revision of some old concepts presented in the first edition of this book. As a result the new edition differs from the first in a number of chapters. Its extensive Table of Contents gives a detailed review of the book. There are 45 references, all of them Soviet (including 10 translations).

TABLE OF CONTENTS:

ZORIN, V.; DOBROVOL'SKIY, N.

Suggestions prompted by life. Okhr.truda i sots.strakh. no.10:20-22 O '59. (MIRA 13:2)

1. Predsedatel' Novosibirskogo oblastnogo soveta profsoyuzov (for Zorin). 2. Zaveduyushchiy otdelom okhrany truda Novosibirskogo oblsovprofa (for Dobrovol'skiy).
(Novosibirsk Province--Industrial hygiene)
(Factories--Design and construction)

DOBROVOL'SKIY, N., Eng., and PLYSHEVSKIY, I.

Drilling rig AVB-3-100. MTS 12. No 9, 1952.

DOBROVOL'SKIY, N., polkovnik; VEKHOV, S., inzh.-podpolkovnik, kand. khimicheskikh nauk

Radioactive contamination and the decontamination of water. Tekh. i vooruzh. no.4:47-50 Ap '64. (MIRA 17:9)

DOBROVOL'SKIY, N.D., gornyy inzhener.; ZAYTSEV, G.G., gornyy inzhener.; BYBIN, F.F., gornyy inzhener.; SHILOV, P.G., gornyy inzhener.

New alternative to the ore storage system for lode mining in unstable rock. Gor. zhur. no.2:7-9 F '57. (MLRA 10:4)
(Mining engineering)

DOBROVOLSKIY, N. F., ASS, T. V. and BYLINKO, G. N.

"Microdetermination of chloride in plasma with diphenylamine as adsorption indicator," Biokhimiya 3, pp 751-8, 1938.

The method is accurate to about 2%. Proteins are removed by boiling with HOAc and $MgSO_4$; treatment with activated charcoal follows The indicator is freshly prepd. before use; 0.02 N $AgNO_3$ is employed for titration.

H. Cohen

Chair of General Chemistry, 1st medical Inst. K-kaya